

# Objective Force Soldier Requirements Review Council



*Soldiers....the Centerpiece of our Formations*

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# **Objective Force Soldier RRC PURPOSE**

- **Obtain CSA approval of concepts and way ahead to market, outreach, recruit, assess, precondition, train, and equip the Objective Force Soldier**
- **Obtain CSA approval to pursue new management model for Soldier weapons and equipment acquisition**
- **Identify emerging resource requirements for POM Process**
- **Frame issues for decision in the Personnel Transformation RRC and State of the Army Review (2d QTR, FY03)**



# Objective Force Soldier RRC AGENDA

***5 min RRC Introduction***

***LTG Riggs***

***50 min***

***Developing the OF Soldier***

***MG***

***Rochelle/COL Fondacaro***

***40 min***

***Equipping the OF Soldier***

***- Science & Technology***

***Dr. Andrews***

***- Acquisition***

***COL(P) Moran***

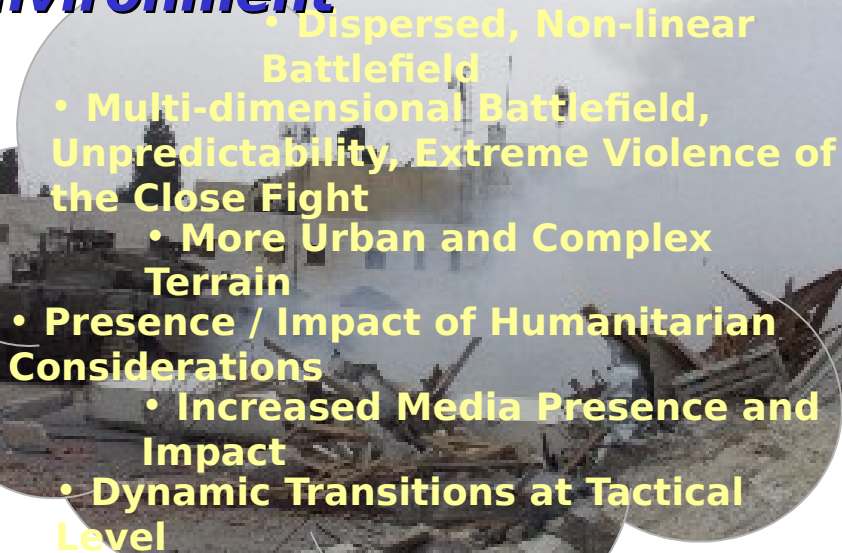
***25 min***

***Discussion/Summary***

# **The Operational Environment And The OF Soldier**

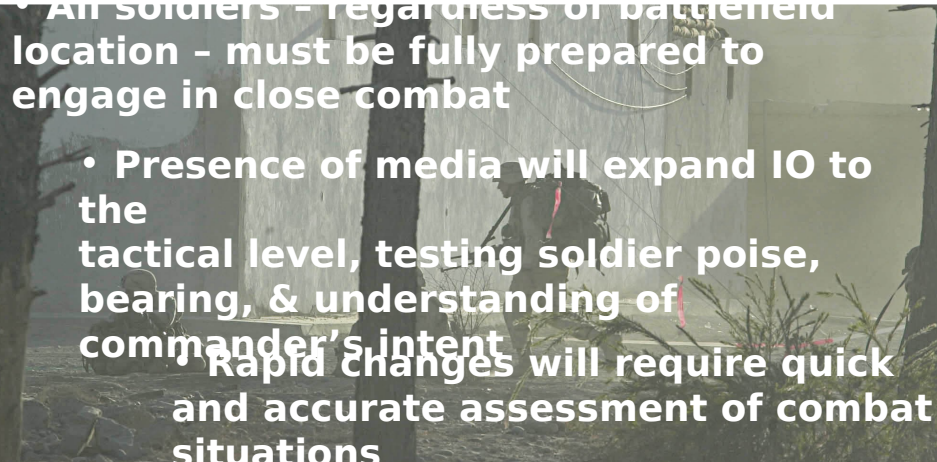
**Which**

## **The Future Environment**

- 
- Dispersed, Non-linear Battlefield
  - Multi-dimensional Battlefield, Unpredictability, Extreme Violence of the Close Fight
  - More Urban and Complex Terrain
  - Presence / Impact of Humanitarian Considerations
  - Increased Media Presence and Impact
  - Dynamic Transitions at Tactical Level

- Constant, high intensity, close combat
- No rear areas - no sanctuary
- Information Operations effects down to the tactical level
- Constantly changing ROE and tactics
- Combatant and non-combatant roles blurred.
- Extreme stress, soldier / leader fatigue

## **Requires Consideration of these Factors**

- 
- All soldiers - regardless of battlefield location - must be fully prepared to engage in close combat
  - Presence of media will expand IO to the tactical level, testing soldier poise, bearing, & understanding of commander's intent
  - Rapid changes will require quick and accurate assessment of combat situations



Increased physical & psychological stress over longer time frame

- Dispersed distances will challenge discipline, motivation, and confidence in self and team
- Rapid individual judgment and decision-making function at lower levels

# Implications for Soldiers

“By far the most important design requirement will be the development of adaptable soldiers,

## A Different Operational Environment Requires

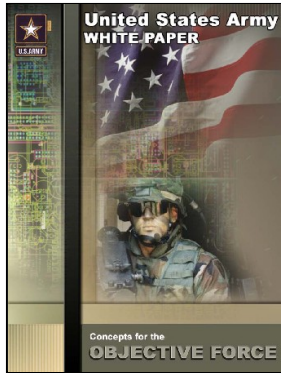
new ways to think & operate

### Design education and training to . . .

- Develop a universal soldier identity as **warriors** with a common baseline of values, discipline, and warfighting expertise
- Develop mental agility and versatility to master rapid transitions
- Develop confidence resolving ambiguity and dominating any situation
- Develop and foster a universal, **warrior** culture based on disciplined initiative, teamwork and mutual respect & appreciation



# Soldiers Are the Centerpiece of Our Formations



**Objective Force Soldiers must master the transition requirements to *see first, understand first, act first, and finish decisively* faster than the enemy. How we enable this Soldier to accomplish this will have profound implications on how the Army recruits, trains, and equips its Soldiers**

## **Soldiers' Confidence Derives From**

- **Confidence in Training**
- **Confidence in Equipment**
- **Trust in Leaders**



***“Their collective proficiency and willingness to undergo the brutal test of wills that is combat remains the ultimate test of Army force readiness.”***

# Preparing Soldiers for the Objective Force



- Invest in those qualified to join the Army
- Instill the Army Values
- Imbue the Warrior Ethos
- Motivate to remain, and develop through standards-based, life-long learning
- Train as fit, disciplined, and adaptive team members
- Psychologically and Physically prepare for full spectrum conflict

Effective training produces the force - soldier, leaders, and units - that can successfully execute any assignment or mission (FM 7.0., Training the Force, 1 Oct)

# Different!

***the Past.”***

***FROM TODAY***

- 
- **Structured learner**
  - **Wants to succeed**
  - **Narrow commitment**
  - **Leader dependent**
  - **Orders dependent**
  - **Reactive**
  - **Structured deployability**
  - **Externally motivated**
  - **Follower-oriented**
  - **Undeveloped judgment**
  - **Limited tech exposure**
  - **Task-Focused**

## SUSTAIN

## Embraces Army Values



# Rapid Learner



## Desire for Team Membership



## High Motivation



## Rapidly Evolves to New Tech



## TO THE FUTURE

- 
- Adaptive learner
  - Refuses to accept defeat
  - Broad commitment
  - Self-reliant
  - Disciplined initiative
  - Proactive
  - Deployable mindset
  - Self-motivated
  - Leader potential
  - Sound judgment
  - Comfortable with new technology
- h • Dominates Situations**

***...Every Soldier Imbued with  
Army Values and the Warrior***

# The Objective Force Soldier Model

"BE" "KNOW" "DO"

## Values

## Characteristics

## Actions

**A Soldier of Character and Competence Imbued with the Warrior Spirit, Persuasive in Peace, Invincible in War!**

**Loyalty**  
**Duty**  
**Respect**  
**Selfless Service**  
**Honor**  
**Integrity**  
**Personal Courage**

**Warrior Ethos**  
**Self disciplined**  
**Active Team Member**  
**Proactive**  
**Physically & Mentally tough**  
**Self-Motivated**  
**Confident**  
**Leader Potential**  
**Disciplined initiative**

**Dominates situations**  
**Deployable mindset**  
**Self Reliant**  
**Adaptive Learner**  
**Decisive**  
**Sound Judgment**  
**Versatile**  
**Expert in Warfighting and in the use of Emerging Technology**

**Operating**  
**-See first**  
**-Understand first**  
**-Act first**  
**-Finish Decisively**  
**Interacting**  
**- Listen**  
**- Speak**  
**- Network**  
**Improving**  
**-Learn**  
**-Grow**  
**-Achieve**

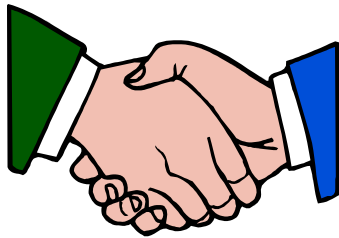
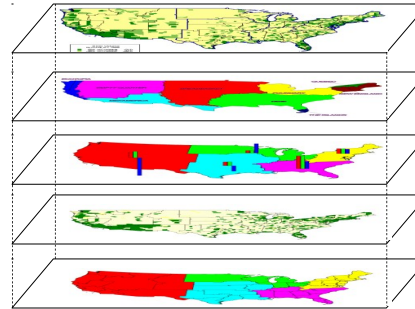
**The Objective Force Soldier - Centerpiece of Our Warrior Culture**

# Transforming The Accessions Process - Accessing

**FIRST HANDSHAKE**

## UNDERSTAND THE MARKET

Situational awareness  
Objective Force market dynamics

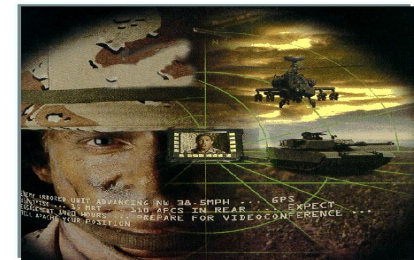


## STRATEGIC OUTREACH

Leverage communications technology  
National campaign strategy  
Warrior Ethos message

## RECRUIT

Empower recruiters through selection and training  
Web-based recruiter engagement  
Physical, mental, skill-based assessment



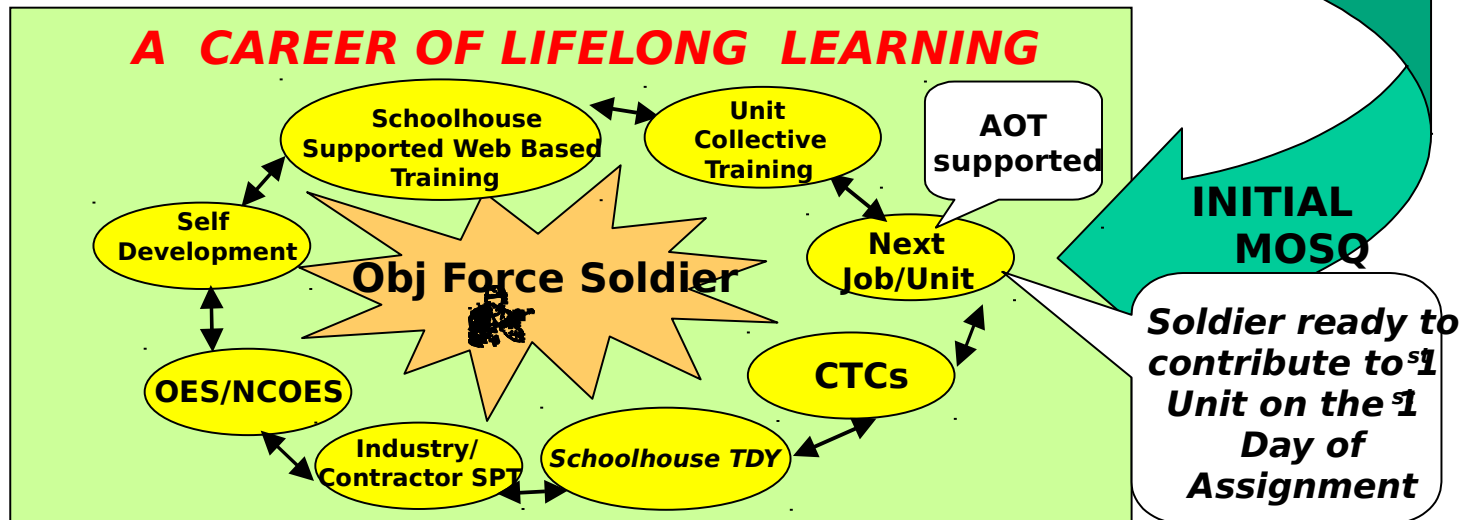
**"A seamless, integrated, standards based process that transitions  
between recruiter, soldier, trainer, and first unit"**

**• Market • Outreach • Recruit • Assess • Preconditioning**

# Transforming The Accessions Process

## TO FIRST UNIT

### Initial Entry Training Integrated Training Model

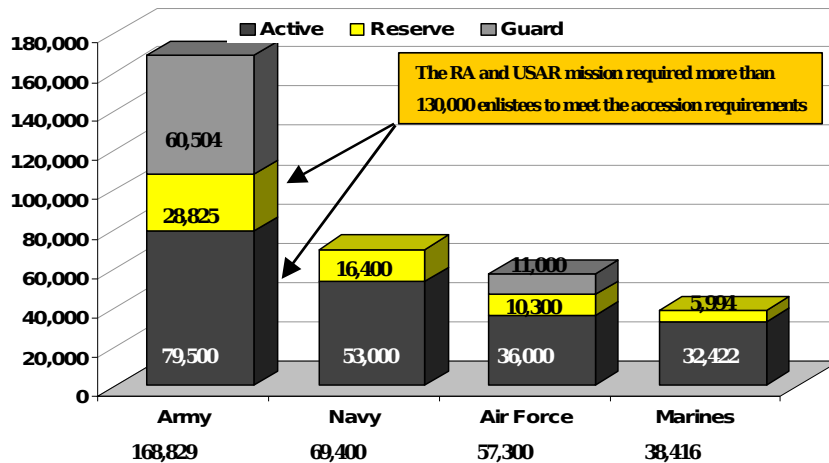


• Market • Outreach • Recruit • Assess • Preconditioning •

# Recruiting the Objective Force Soldier

## Magnitude & Scope of the Mission

**Services Accession Missions (FY02)**

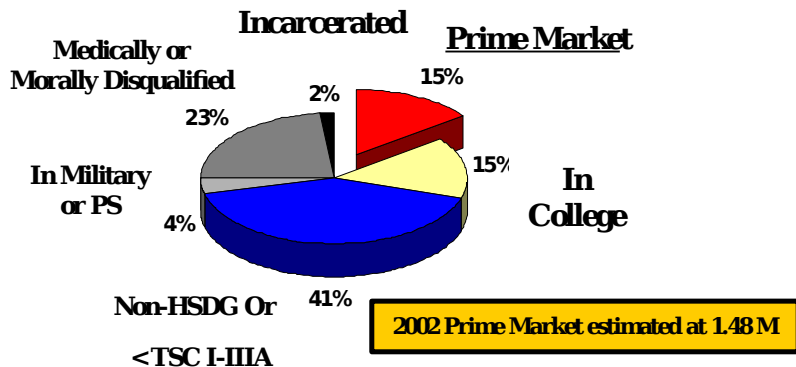


- The Army (RA, USAR and NG) mission is greater than all other services combined.
- Army recruiting is complex and precise.

Must locate qualified applicants and present them the full array of Army opportunities:

- over 200 enlisted specialties
- 40 Warrant Officer Specialties
- ROTC and OCS Missions
- 48 Medical Officer specialties

“Right Soldier and Right Skill at the Right Time and Place.”  
Program

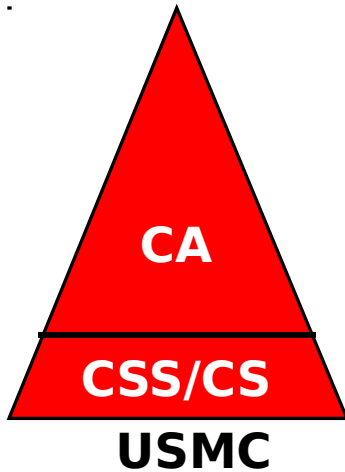


“You recruit an entire French Army a year.” BG Elrick Irastorza, Director French Army Recruiting Command, USAREC Visit 29 April 2002

• Market • Outreach • Recruit • Assess • Preconditioning •

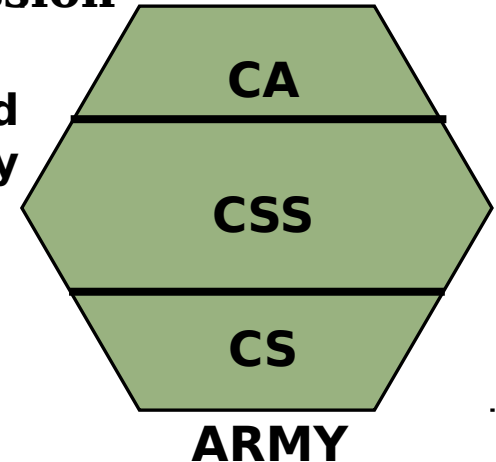
# Recruiting the Objective Force Soldier

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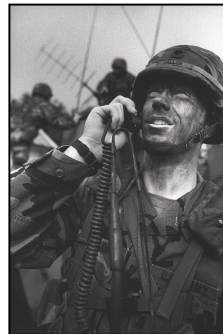


- The Army must recruit for a broad range of skills with universal quality and standards.

- Every soldier's job in Army formations is an important one.



- Force composition drives recruiting requirements
  - USMC composition: CA 62% and CSS/CS 38%
  - Army composition: CA 27.2%, CSS 42.8%, and CS 30%
  - USMC recruits for 38 enlisted programs
  - Army recruits for 212 enlisted specialties (+)

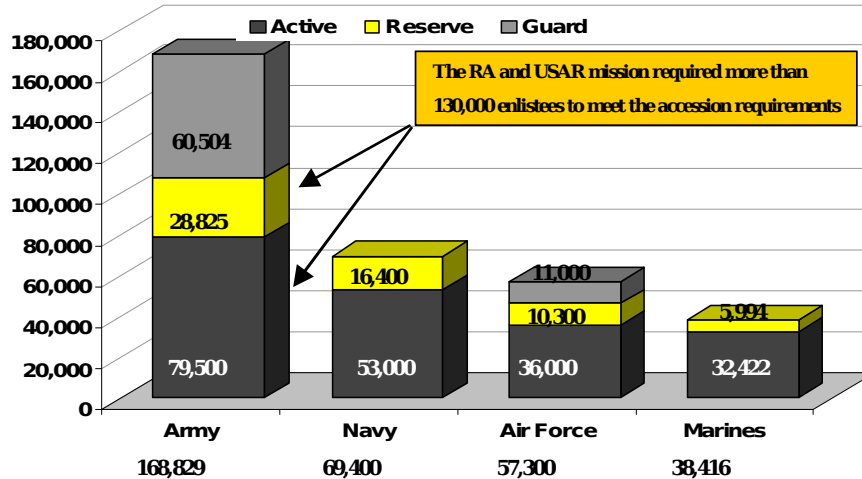


• Market • Outreach • Recruit • Assess • Preconditioning •

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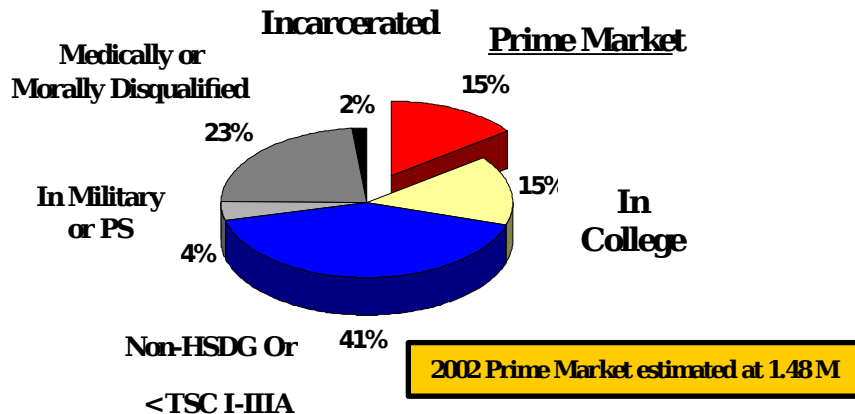


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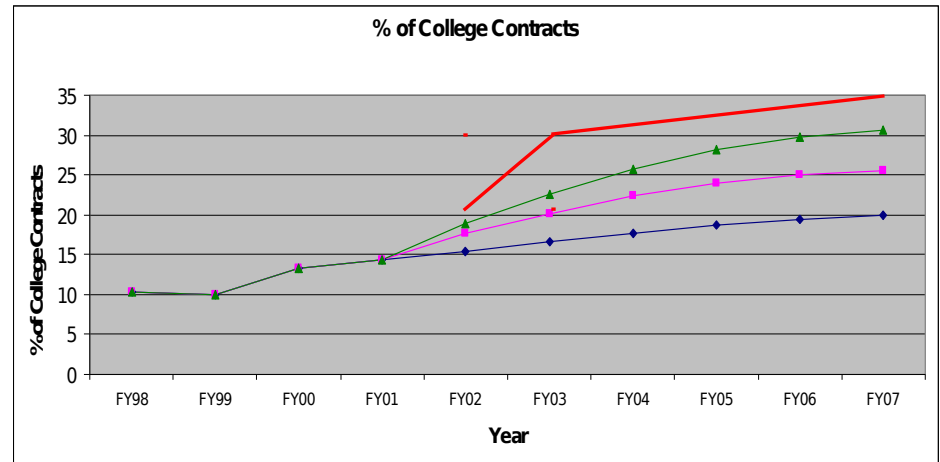
# Recruiting the Objective Force Soldier

## Growing the Objective Force Leader

	<u>Goal:</u>	<u>FY02:</u>	<u>FY08:</u>
HS	90%		91%
94%			
CAT I-III A	63.5%	68%	
75%		→	
CAT IV	2.0%	1.38%	
1.38%			
"Some College"	15%	21.1%	
35%			
Hispanic	12%	12.7%	
7%			
MOS Precision	19.9%		
100%			

- To grow our prime market, must expand our efforts in the college market

- The Objective Force Leader is on the college campus



The FY02 cohort are the future NCO leaders of the Objective Force

The accession process is about finding our future soldiers and developing them into our future leaders!

• Market • Outreach • Recruit • Assess • Preconditioning •

# Market Dynamics

## Characteristics

### **FROM TODAY**

**Generation X**

**Millennials**

**Market trends**

- Prime market growing at slow pace
- College continuation remains high
- More diverse than previous generations



### **TO TOMORROW**

**Next generation not identified**

**Market trends**

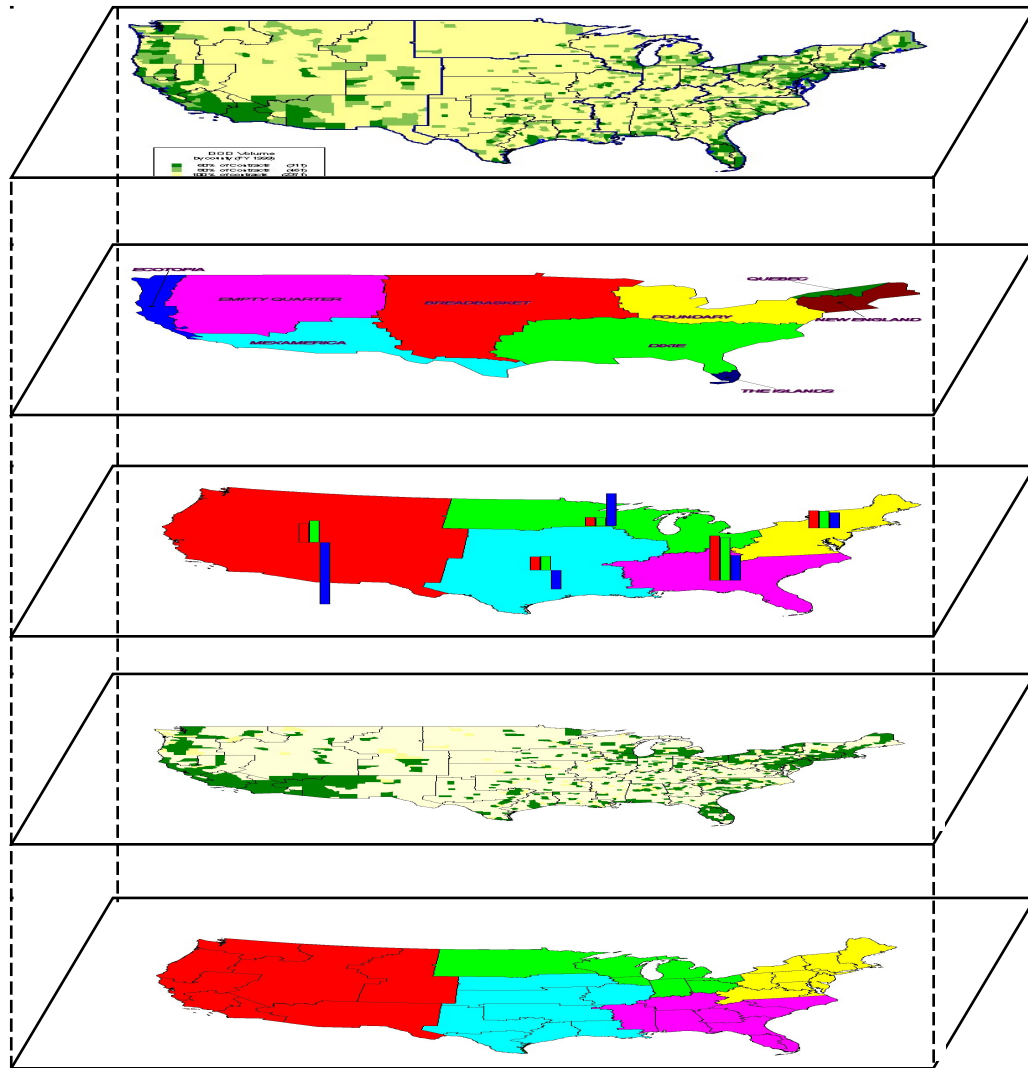
- Prime market growing at slow pace
- College participation increasing
  - Highly diverse society

**Impact on the Objective Force**

- Skill mix more combat heavy; may reduce percent of females
- Higher aptitude; need to train more complex weapon system
- Somewhat greater seniority

**"Market research is imperative to pinpoint the objective force soldier with unprecedented accuracy! "**

# Strategic Market Assessment-- Using an IPB Approach



- ☀ **Production Analysis**
- ☀ **Socio-Cultural Analysis**
- ☀ **Psychographic Analysis**
- ☀ **Demographic Analysis**
- ☀ **USAREC Force Structure**

• **Market** • Outreach • Recruit • Assess • Preconditioning • T

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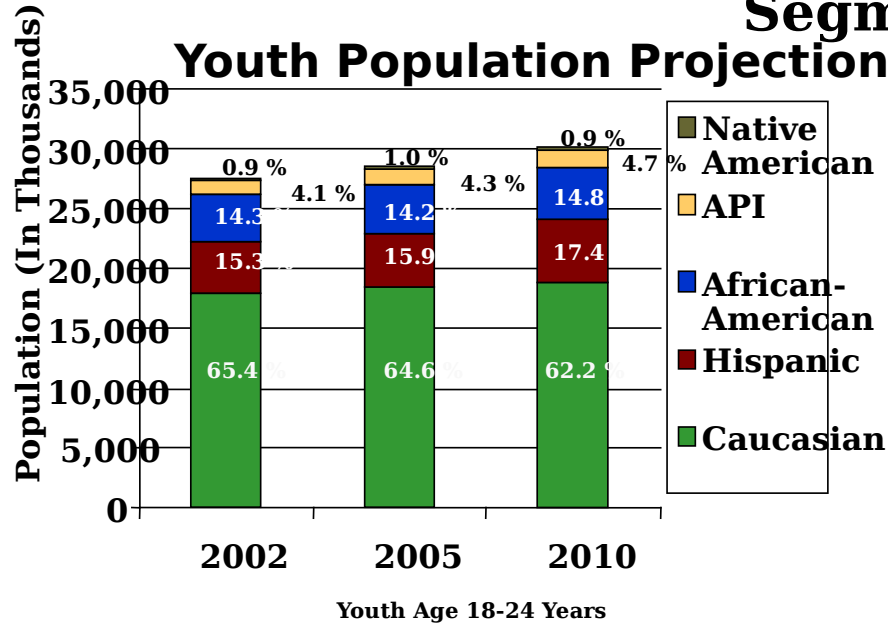
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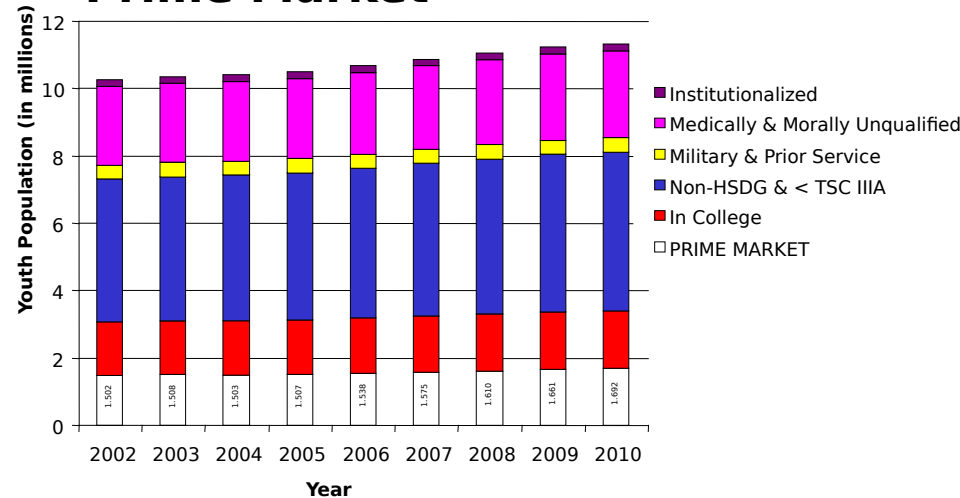
# Market Dynamics

## Segmentation

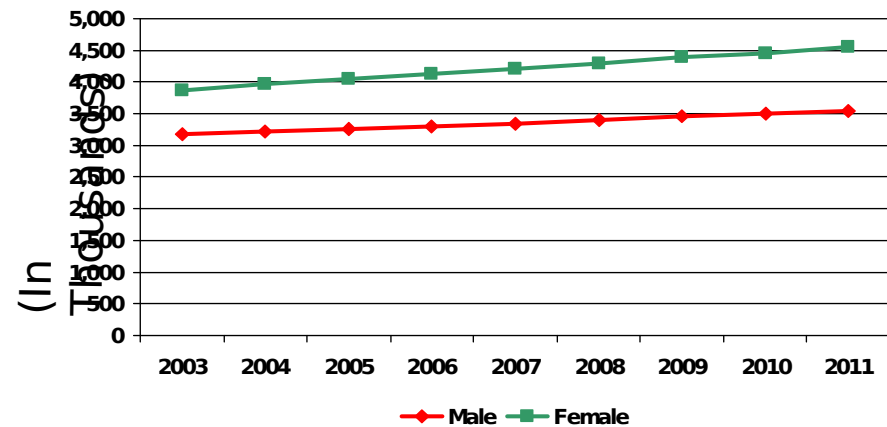
### Youth Population Projections



### Prime Market



### 4 Year College Full-Time



High rate of college continuation and market diversity require a transition to advanced analysis and adaptive methods to dominate.

• **Market** • Outreach • Recruit • Assess • Preconditioning • T

# Market Dynamics

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# **Implications**

**Invigorate market research**

**Harder to identify OFS as society becomes more diverse socially/economically/culturally**

**Consider 3 dimensions: cognitive, physical and socio-/psychological**

**Develop more efficient, high-value targeting process**

**Seek integrated partnerships to share emerging opportunities**

# Strategic Outreach

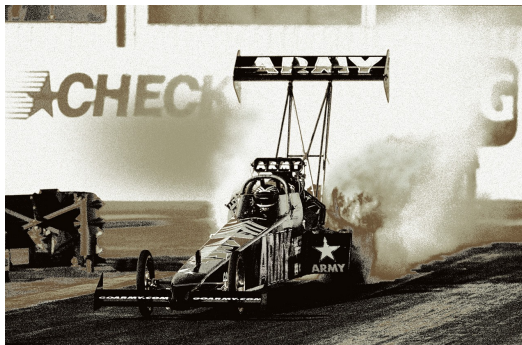
## FROM TODAY

- National Campaign Strategy
  - Establish Army as Top of Mind
  - Leverage communication strategies
  - Targets future soldiers and influencers
  - National events to drive industry and local involvement



## TAMACC TO TOMORROW

- National Campaign Strategy
  - Deliver the values based Warrior Ethos message
  - Precise targeting of message and media to emerging markets
  - Shapes the attitudes and perceptions of the American people toward the "Objective Force"



"Can ill afford a large number of recruiters on the street in a movement to contact"

Partnerships are pivotal to connecting with America

• Market • Outreach • Recruit • Assess • Preconditioning • Technology will likely drive message delivery

# **Implications**

**Respond to the future environment to reach the OFS**

**Requires real time response capability**

**Rapid and adaptive tailoring of messages**

**Stay ahead of the pace of change**

**Technology driven synchronized marketing and communication process**

# Transformed Integrated Process

## Recruiter Selection and Training

### FROM TODAY

- Volunteer (35%) / Detailed (65%)
- Minimum Criteria
- Traditional training program
- Predominantly classroom environment - little simulation
- Doesn't integrate and capitalize on technology
- Provides minimum knowledge base prior to first assignment



### TO TOMORROW

- All Volunteer
- Selection and screening instruments
- Tailored, self-paced training
- Employs virtual environment and use of simulation
- Fully integrates and maximizes technology (Web)
- Provides confident and competent recruiter

Central to success    Maximize technology

Identify innate skills

Standardize image

**"Recruiters that embody the model objective force soldier with skills, professionalism and technology."**

• Market • Outreach • **Recruit** • Assess • Preconditioning •

# **Implications**

**Fewer NCOs required to achieve higher levels of production in a quality market**

**Enable recruiters with technology**

**Recruiter must operate integrated systems in a dynamic environment**

**In a more focused market, the recruiter must dominate**

# Transformed Integrated Process

Accessions Process

*TO TOMORROW*



*FROM TODAY*

- Limited, assembly line like assessment
- ASVAB excludes from jobs
- Tied to fixed facilities
- Inefficient, mass processing
- Not responsive to the applicant

- Comprehensive assessment
  - Personality/Adaptive screening
  - Medical diagnostic evaluation and qualification
- Best fit MOS (KSA / Select XXI)
- Real time sales
- Mobile, networked recruiter
- Responsive and flexible
- Market based recruiting



Wall practices • Market • Outreach • Recruit • **Assess** • Preconditioning • T

# **Implications**

**Maximizes current capability and potential of Objective Force Soldier**

**Synergistic approach to MOS assignment**

**Shortens the process from civilian to Objective Force Soldier**

**Cost effective**

**Customer oriented**

**In-depth assessment**

**Improves Trainability**

**Reduces new soldier losses**

# Transformation Estimates

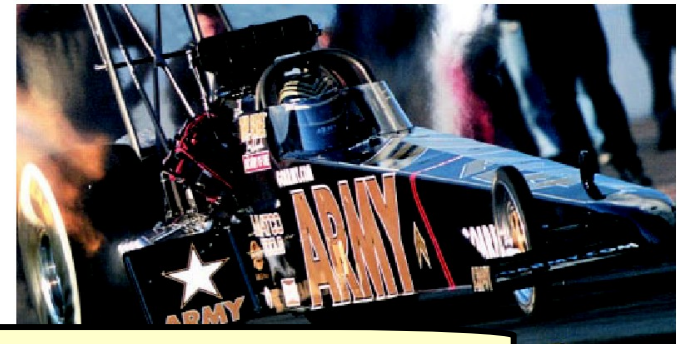
## (FY03-09)



**Information Technology:** Includes the necessary HW & SW investments to move our current recruiter support systems away from client server to a web-based environment...as well as implementation of a common portal to allow access from the outside (e.g., for applicant self-processing)

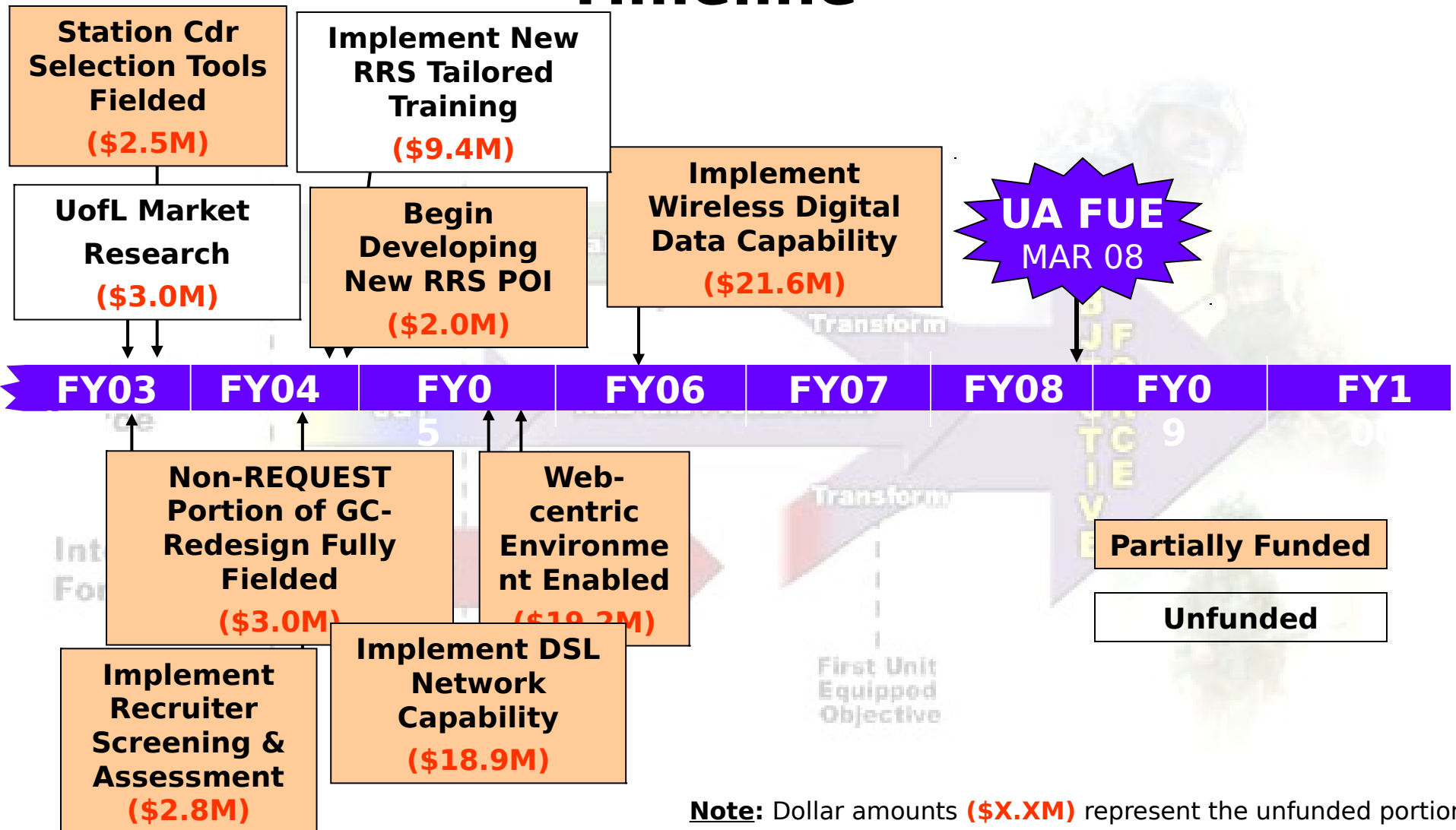
CATEGORY (In Millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Total
Operations (Incl Facilities)	7.7	11.7	9.2	9.6	10.8	1.9	1.5	52.4
Information Technology	12.2	11.2	2.9	2.6	3.2	2.6	2.6	37.3
Communications	3.3	6.5	8.4	8.5	7.0	4.0	3.0	40.7
Training	2.8	4.6	3.0	1.0	1.0	1.0	1.0	14.4
Strategic Outreach		14.0	19.3	30.6	33.0	35.6	38.5	171.0
<b>Total</b>	<b>26.0</b>	<b>48.0</b>	<b>42.8</b>	<b>52.3</b>	<b>55.0</b>	<b>45.1</b>	<b>46.6</b>	<b>315.8</b>

**Strategic Outreach:** Includes incremental research costs to identify specific requirements and to test new programs for future recruiting efforts...as well as the addition of targeted marketing programs in FY04 and FY06



• Market • Outreach • Recruit • Assess • Preconditioning •

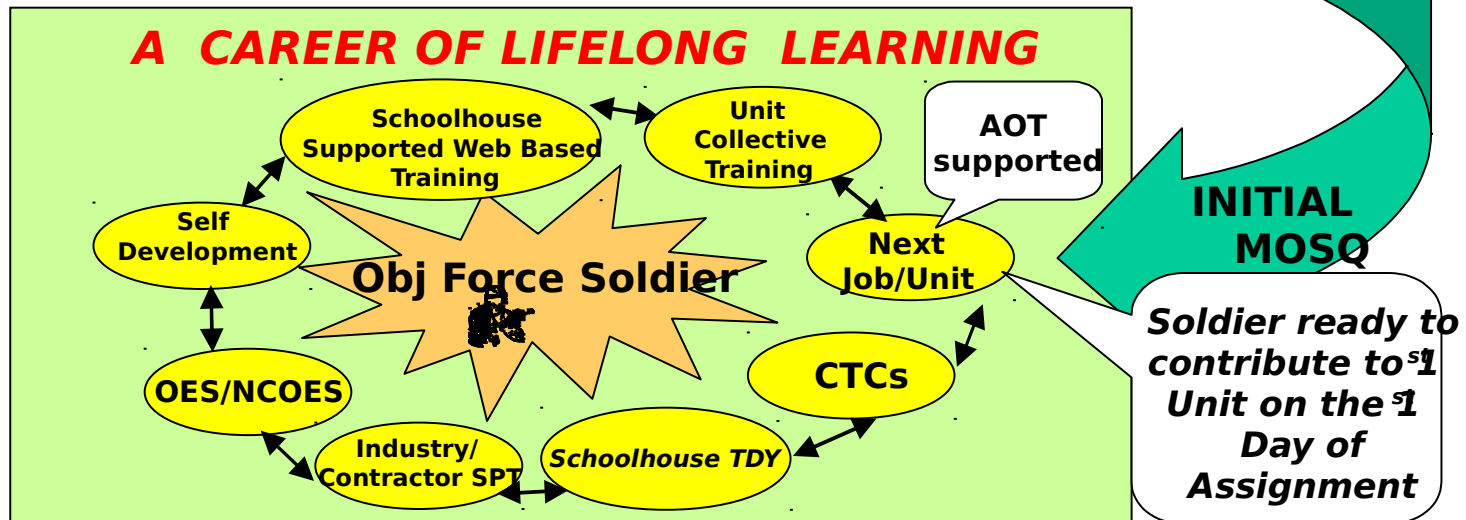
# Objective Force Recruiting Timeline



• Market • Outreach • Recruit • **Assess** • Preconditioning •

# Transforming The Accessions Process

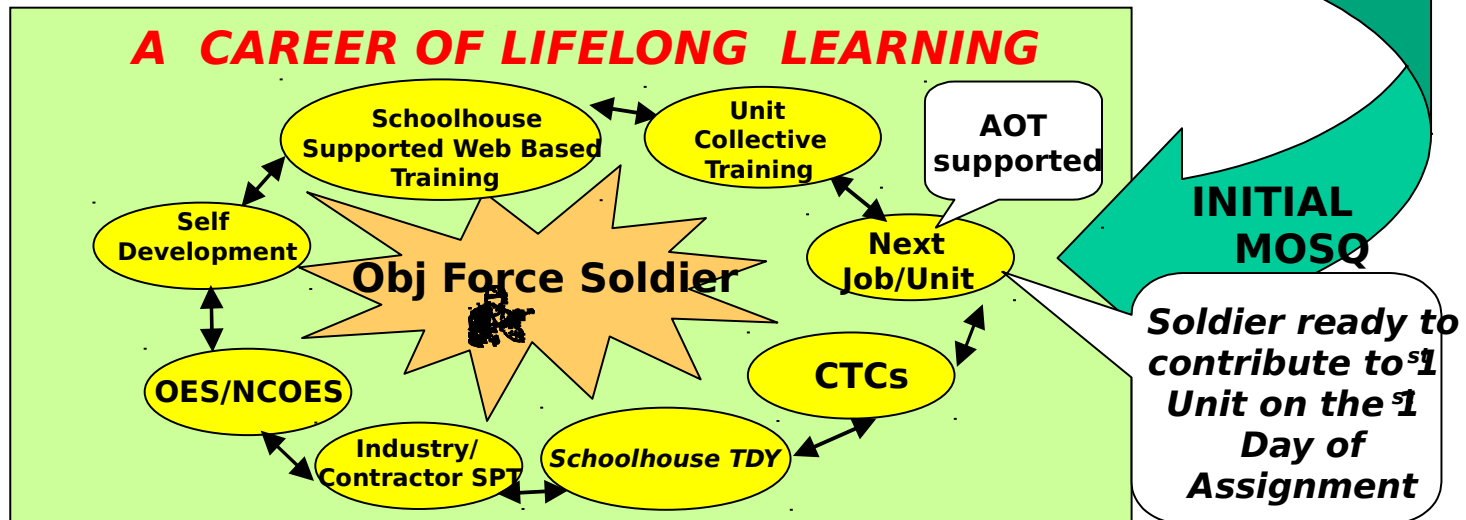
## Initial Entry Training Integrated Training Model



• Market • Outreach • Recruit • Assess • Preconditioning •

# Transforming The Accessions Process

## Initial Entry Training Integrated Training Model



• Market • Outreach • Recruit • Assess • Preconditioning •

# PRECONDITIONING

## FROM TODAY

- **Limited Assessment/  
Inaccurate Predictor of  
Success**
- **Attrition-Based System**
- **Extensive Rehab Time/  
Physical & Psychological**



**Sets Soldiers Up for  
IET SUCCESS!**



**Invests in soldiers  
qualified to be  
in the Army**

## TO TOMORROW

- **Comprehensive Assessment-Based  
Training**
- **Tailored PRT**
- **Language**
- **Soldiers Positively Reinforced**



• Market • Outreach • Recruit • Assess • **Preconditioning** •

# Implications

**Leverages Early Assessment**

**(Training Population has High Potential for Success)**

**Drives the Overuse Injury Population to Zero**

**Reduces TTHS**

**(Preconditioning time much less than rehab)**

**Maximizes Flow Through IET**

**Maximizes Potential for Retention**

# OF Initial Entry Training



## FROM TODAY

- BCT, OSUT, AIT Constructs
- Branch vice Warrior Ethos
- High Student-Instructor Ratio
- Standard Army PRT
- Minimum Standards Based

## TO TOMORROW

- Job Skills Trained under Battlefield Conditions/Integrated Combat Skills
- Value Based, Warrior Ethos Imbued
- Maximum Potential Focused
- Unit Cohesion Leveraged to the Fullest
- PRT Designed to :
  - Maximize Performance
  - Minimize Attrition
  - Follow-on Technical Skill Training By Exception/Multiple Means
- Modernization Fully Synchronized with Opn'l Army Equi

• Market • Outreach • Recruit • Assess • Preconditioning •

# Implications

- **High Performance MOSQ- Immediately Relevant to 1<sup>st</sup> Unit**
- **Supports Train, Alert, Deploy**
- **Grounded in Army Values**
- **Imbued with Warrior Ethos**
- **Enabled by OF MOS Modernization (Task Update, MOS Consolidation, Restructure)**

# Assignment Oriented Training

- Training focused on requirements for unit assignment
- Component of Life Long Learning Process - Provides TRADOC resident and/or distributed training
- Permits training of individuals for an Army comprised of Legacy, Stryker, and Objective Forces - next 25 years
- Enables unit manning and unit rotation options
- Improves unit readiness - soldiers arrive able to immediately contribute to the unit



**Fundamental  
to Train-Alert-  
Deploy  
Strategy!**

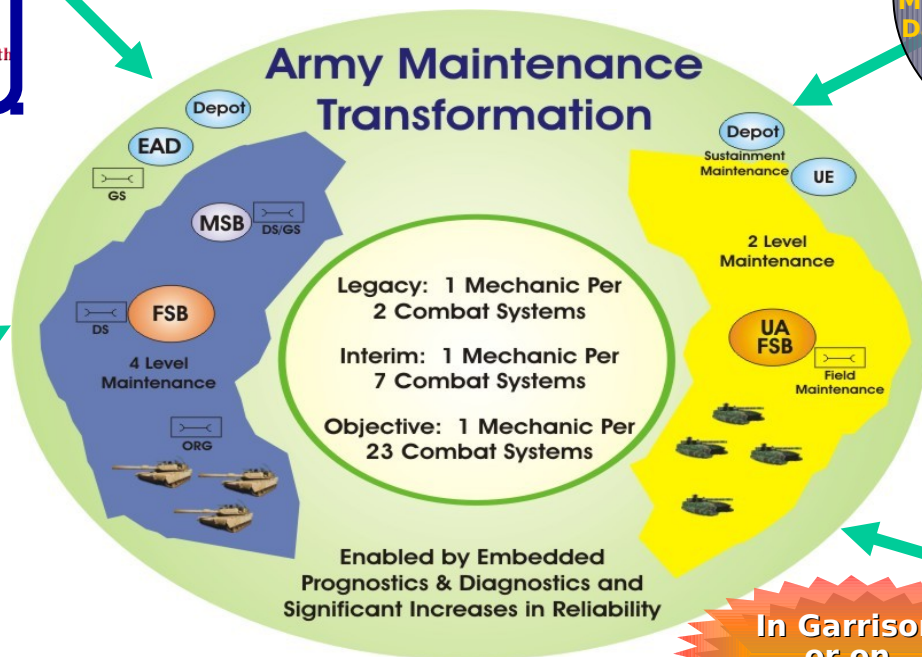
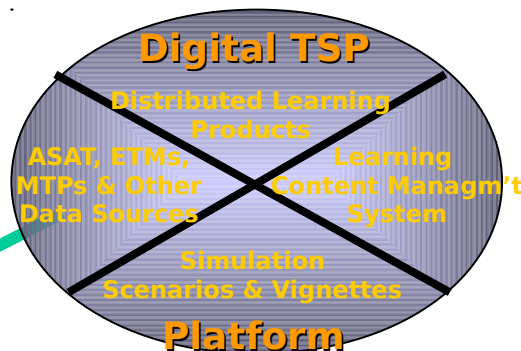
# Implications

- Improves MOSQ - Moves soldiers from 78% to better than 95% of critical tasks trained in the institution
- Fundamentally changes future training base infrastructure. Distributed now to wherever soldiers are in addition to the traditional schoolhouse.
- Soldiers trained on same equipment in 1<sup>st</sup> Unit
- Keeps pace with changing technology
- Sustainment training available through DL
- Will require transformation of the personnel assignment process.
- Need Resource Centers with Reach Back Capabilities

# Life Long Learning

## The OF Soldier

- Multi-skilled
- Increased span of responsibility
- Aided by technology



MOSQ



## Robust Life-Long Learning Provides:

- Reach back to SME's at institution
- Technical updates
- Right-time training



In Garrison or on Deployments

• Market • Outreach • Recruit • Assess • Preconditioning •

# Implications

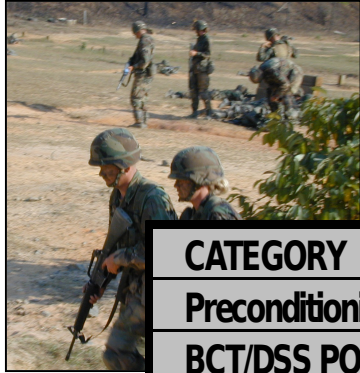
- **Wherever Soldiers / Leaders are Located**
- **Just-In-Time / On-Demand**
- **Reduces overall training and simulation development**
- **Interactive computer simulation**
- **Multiple repetitions at minimum cost**
- **24/7 reach for support on materials, information, and help**
- **Improves Individual and Unit Readiness**
- **Standardized Training**
- **PERSTEMPO Reduction-Reduced TDY**
- **RC Man-Day Reduction**
- **Reduces TTHS**
- **Cost Avoidance**



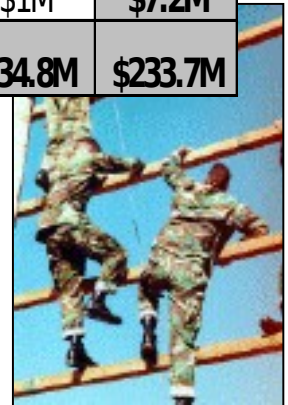
***Army  
Investment  
Needed!***

# Transformation Estimates

(FY03-09)



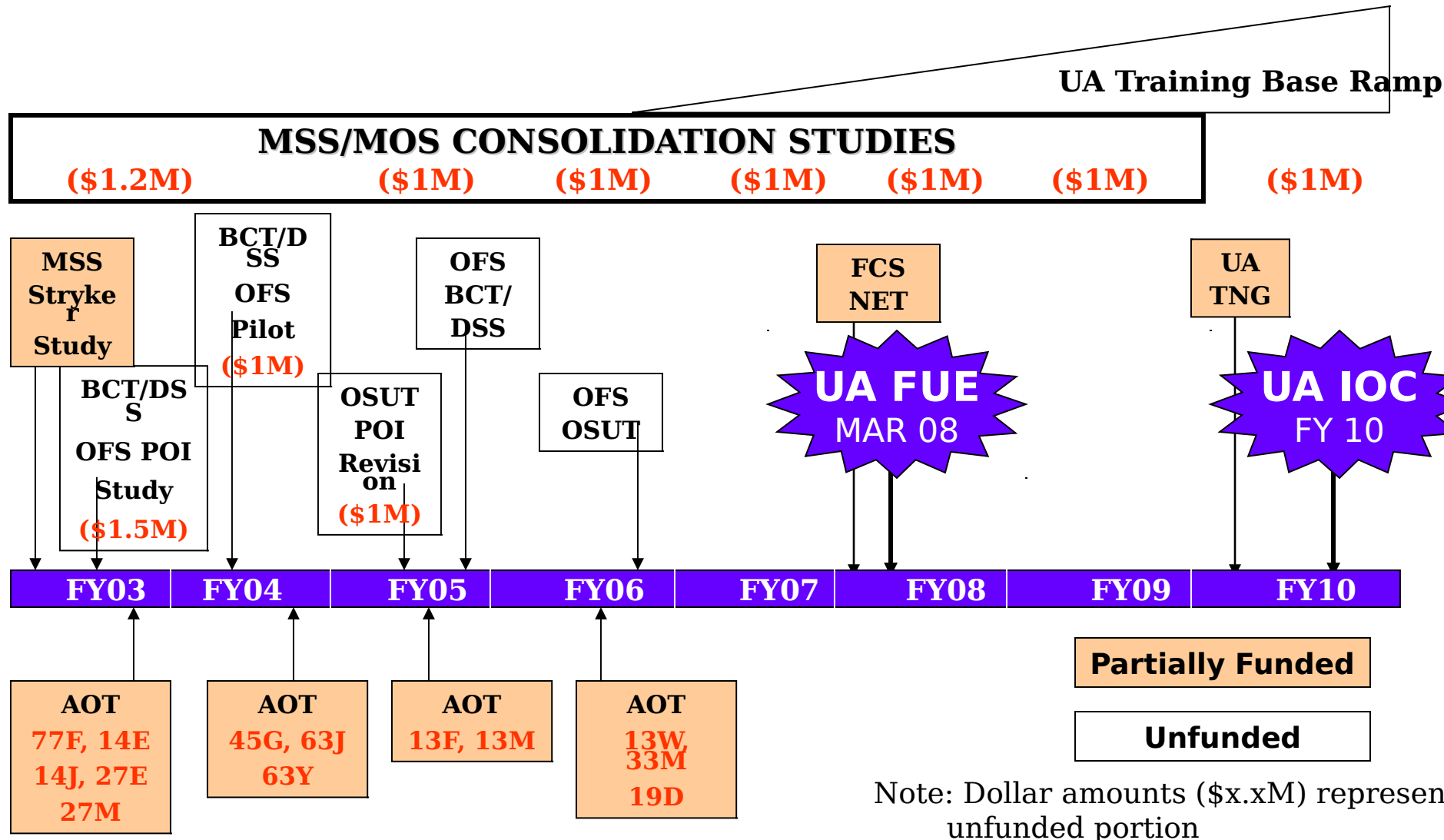
CATEGORY	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	TOTAL
Preconditioning Study	\$1.5M							\$1.5M
BCT/DSS POI Development & Pilot	\$1.5M	\$1M						\$2.5M
OSUT POI Development			\$1M					\$1.0M
Assignment Oriented Training Life Long Learning*	\$8.8M	\$50.0M	\$43.7M	\$37.6M	\$33.8M	\$33.8M	\$33.8M	\$221.5M
MSS/MOS Consolidation*	\$1.2M	\$1M	\$1M	\$1M	\$1M	\$1M	\$1M	\$7.2M
<b>TOTAL</b>	<b>\$13.0M</b>	<b>\$52.0M</b>	<b>\$45.7M</b>	<b>\$38.6M</b>	<b>\$34.8M</b>	<b>\$34.8M</b>	<b>\$34.8M</b>	<b>\$233.7M</b>



\* Previously presented at DTLD RRC

• Market • Outreach • Recruit • **Assess • Preconditioning •**

# Objective Force Training Timeline



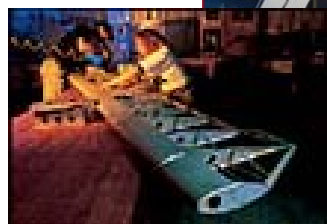
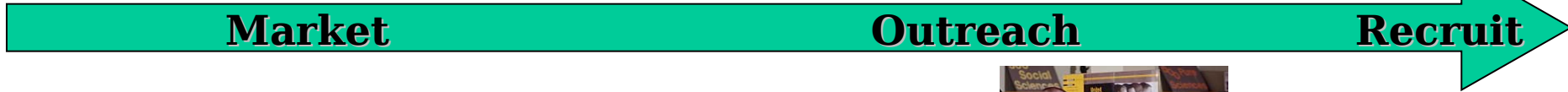
• Market • Outreach • Recruit • **Assess** • **Preconditioning** • Train

# A Seamless Transition in an Integrated Process

## Comanche Aircraft Repair Example

### 1. Understand the Market      2. Strategic Outreach      3. Recruit

- Situational Awareness (locate the market)
  - Embry Riddle
  - VOTECH
- Direct mail to prospects with aviation interests
- Aviation periodical advertisements
- Aviation industry partnerships
- Recruited by those Selected and Trained
- Assessed to determine if suitable for aircraft repair
- Sold on the job and schedule for training at the prospects home
- or -
- Self applied on the web



**Business & Commercial Aviation**

**AVIATION WEEK & SPACE TECHNOLOGY**



# A Seamless Transition in an Integrated Process

## Comanche Aircraft Repair Example

### **4. Assess**

- Medically qualified using diagnostic evaluation instruments
- Assessed as requiring strengthening exercise preconditioning and scheduled

### **5. Preconditioning**

- Begins preconditioning with comprehensive assessment
- Conducts three weeks of

### **6. Train**

- Begins Comanche aircraft repair OSUT
- Basic combat skills integrate with field oriented aircraft repair
- Completes training and reports to Comanche maintenance support unit

**Assess**

**Preconditioning**

**Train**



- **Prospect (w/some college) better suited for job:**
  - **Less DEP Loss**
  - **Less training base attrition**
  - **Retains soldiers from contract to first unit**

- **Less attrition drives mission down**
  - **Reduces training base**
  - **Reduces recruiter requirements**

# Developing & Equipping the Objective Force Soldier



# Objective Force Soldiers Requirements

## **FCS ORD identifies Soldier requirements:**

- Improved Soldier capabilities with:
  - Lethality / Survivability / Mobility / Sustainability / C4ISR / Training
- Increased Soldier survivability: (Mounted or Dismounted)
- Reduced Soldier load
  - 40 lbs
  - No degradation with soldier mobility or performance during individual and collective tasks
- Increased equipment durability / comfort / functionality / ease of operation
- Integration for Soldier C4ISR
  - Equipment / Recharge capabilities / tactical updates
- Storage for individual Soldier
  - Equipment sets / electronic training records / personnel data / doctrinal publications / unit SOPs

# ***Equipping the OF Soldier - Science and Technology***

# ***Equipping the OF Soldier - Science and Technology***

# S&T for Full Spectrum Objective Force Soldiers

## Unmanned Vehicles



OAV (L) A-160 Hummingbird



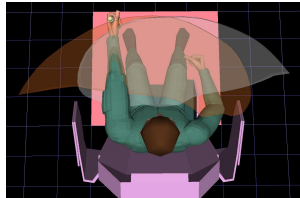
Mule



NLOS/BLOS Fires



Supply Platoon



## Human Factors Engineering

- Human modeling for design
- Cognitive engineering
- Materiel handling/maintenance
- Increase Crew Performance/ Efficiency
- Reduce Crew Size
- Advanced Open Architecture



## Water Recovery & Purification

- Vehicle exhaust
- Ambient air
- Compact, light-weight, energy efficient



## Objective Force Warrior

Robotics

Human Factors

Sustainment



## Rations/Fuel and Feeding

- Enhanced nutrition
- Cogeneration
- Reduced weight & fuel and water consumption

## Accelerated Leader Development

- Virtual command experience
- 360° leadership awareness

## Soldier/Leader Training

- Adaptive leaders
- Mentally agile force
- Cognitive readiness



## Medical Mission Package

- Advanced Resuscitation Fluids
- Automated Critical Care Systems
- Acoustic Hemorrhage Control

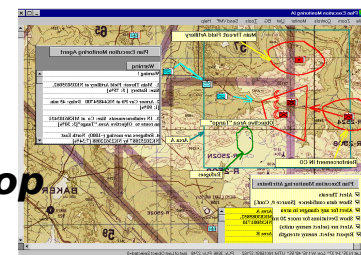


## Precision Airdrop

- GPS guidance
- Soft landing
- Drive-on/drive-off

## CSS COA Software

- Intelligent Agent Alerts



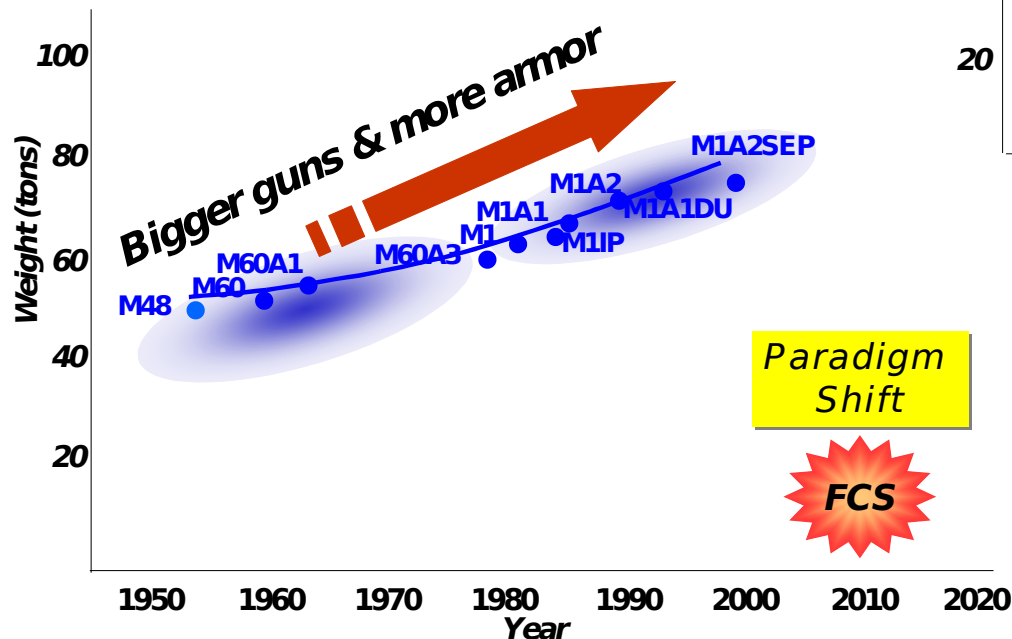


# Objective Force Designs

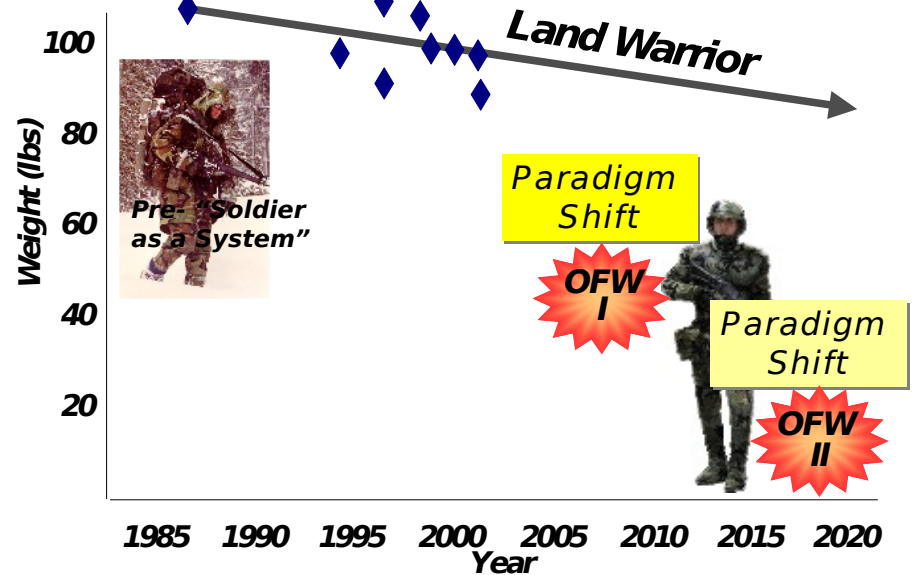
## A System of Systems Approach

### Transformation Demands Paradigm Shift

#### Future Combat Systems (FCS)



#### Objective Force Warrior (OFW)



...Yielding  
Discontinuity  
in Capabilities

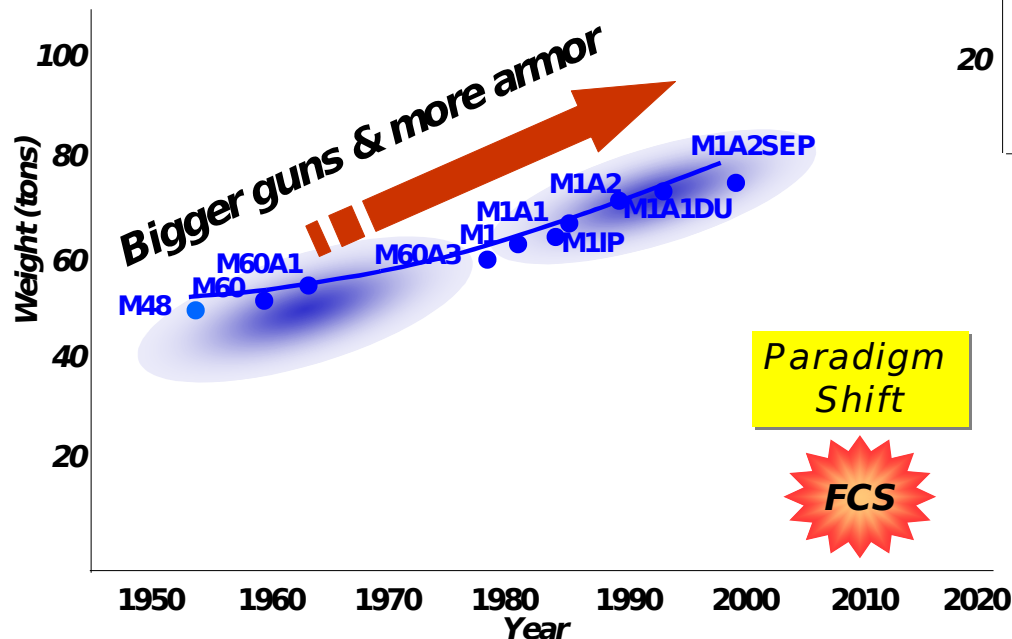


# Objective Force Designs

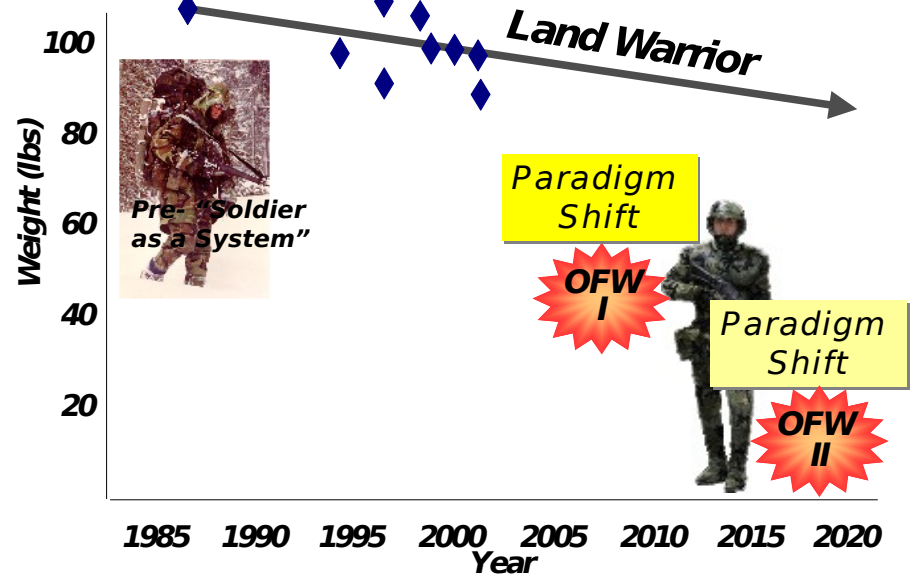
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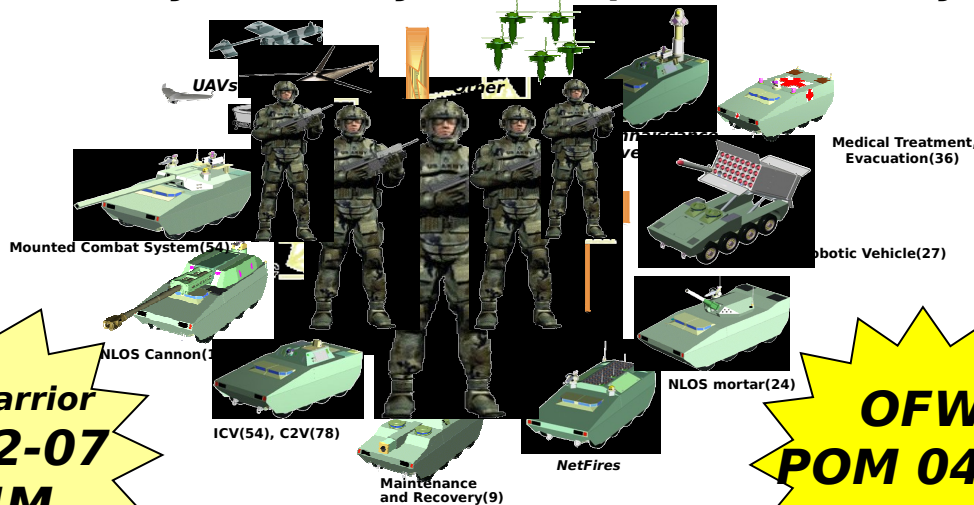
...Yielding  
Discontinuity  
in Capabilities

## Right #4

# Resourcing Warrior Transformation

## The Soldier Completes the UoA/FCS Concept

*FCS is the networked system of systems that will serve as the core building block within all maneuver Unit of Action echelons to develop overmatching combat power, sustainability, agility, and versatility necessary for full spectrum military operations.*



**Future Warrior  
POM 02-07  
\$344M**

**OFW  
POM 04-09  
\$900M**

- “Objective Force Soldiers will be capable of movement with 40 pounds fighting load in all terrain and weather conditions - - with an interest in getting the Soldiers’ fighting load to 15 pounds.”

– United States Army  
White Paper -  
Concepts for the  
Objective Force

**The Soldier is the Center piece of the Objective Force**

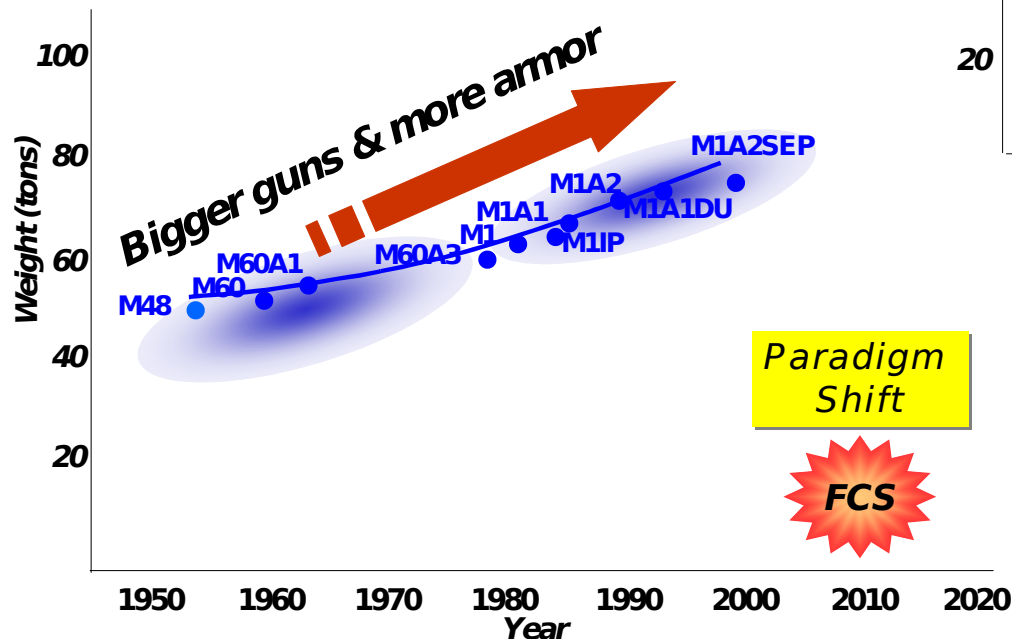
• Synchronized

# Objective Force Designs

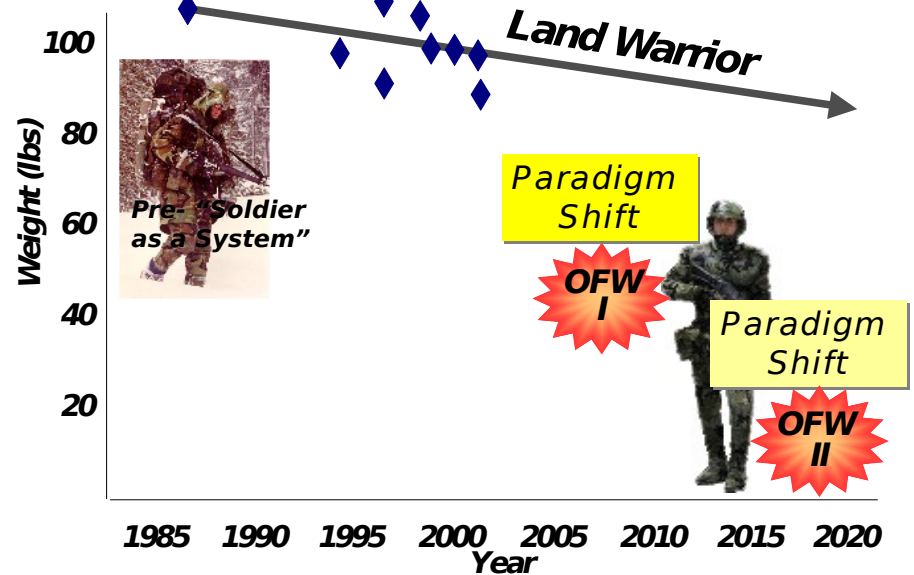
## A System of Systems Approach

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...Yielding  
Discontinuity  
in Capabilities

# OFW Advanced Technology Demonstration Dismounted Capability for FCS FUE 2008

	FY03	FY04	FY05	FY06
<b>ADV TECH</b>				

Concepts

Design & Integration

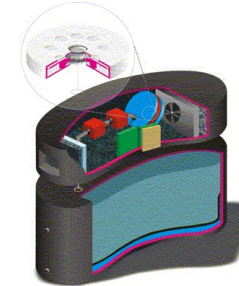
Prototypes (50)  
& Tests

**Netted**



**Interface with  
Robotic Mule,  
UAV, Soldier  
UGVs**

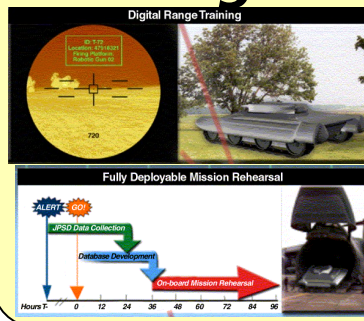
**Lightweight  
Hybrid Power  
System**



**Integrated Combat  
Ensemble & Helmet**



**Embedded  
Training**



**CPL DANIEL A RAMIREZ**

HEARTRATE 113  
BP 108/64  
RES 50/min  
CORE TEMP 97.61

**ACTIVE:**  
O<sub>2</sub> 20 L/min  
COMP 85%  
COAG 350 ml

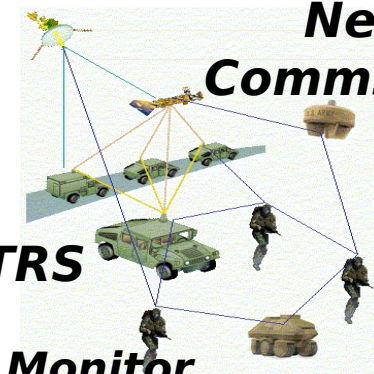


**Warfighter Physiological Status Monitor**

**Netted  
Comms/SA**

**WIN-  
T**

**JTRS**

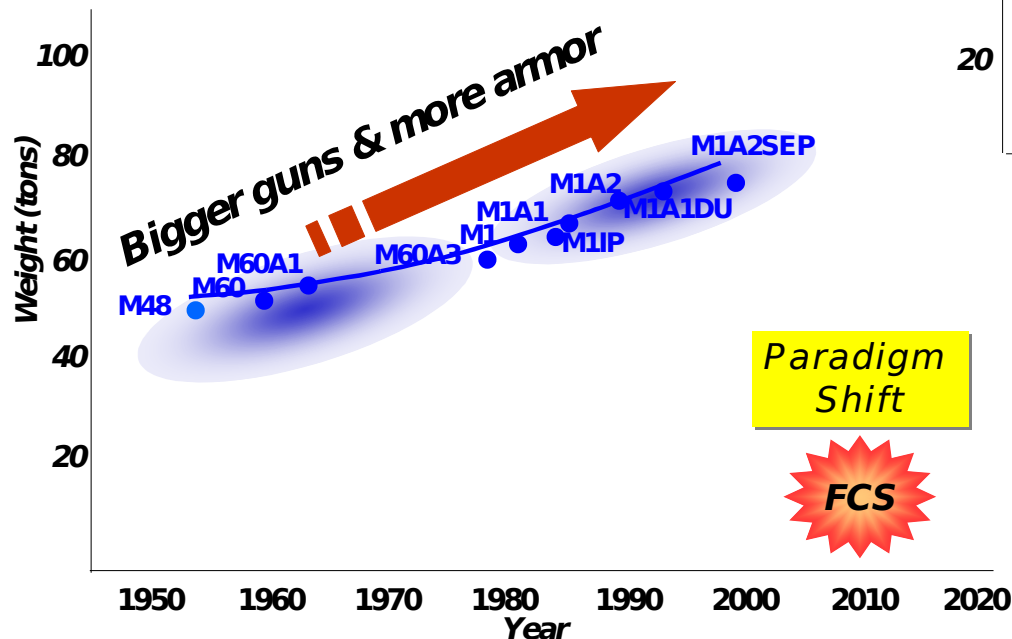


# Objective Force Designs

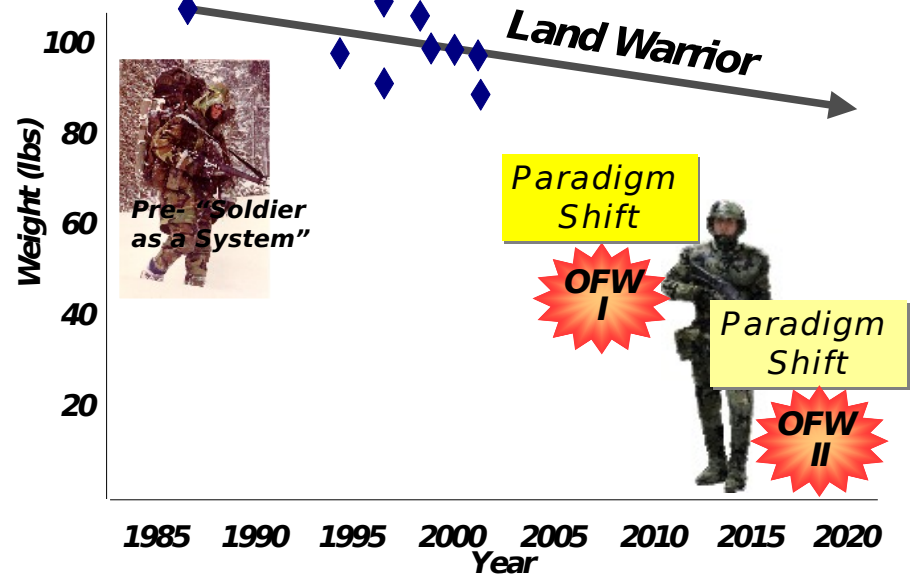
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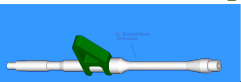


...Yielding  
Discontinuity  
in Capabilities

# Objective Force Warrior II

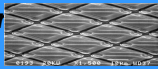
## and Beyond

### Lightweight Individual Weapons



Ceramic Barrel

Composite Structure



Ergonomic Design



Caseless or Plastic Cased Ammunition

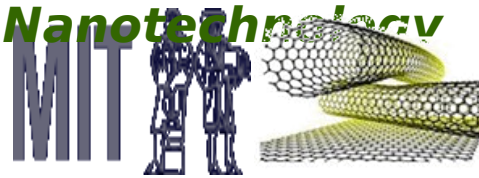
### Biotechnology



Biologically derived power and energy

Institute for Soldier

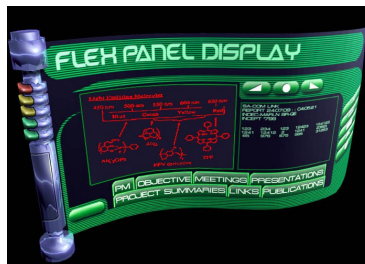
Nanotechnology



### Immersive Environments

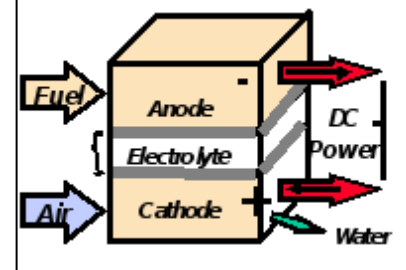


### Flexible Displays



### Power Sources

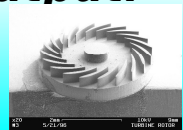
Higher Efficiency Fuel Cells



### Microturbines

Higher Energy Density than Batteries

- For similar power output:
  - 20X lighter
  - 18X smaller



# The Next Paradigm Shifts

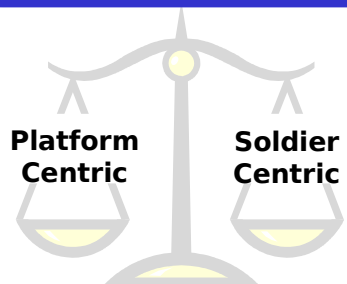
- ▶ **Wears**
- ▶ **Carries**
- ▶ **Consumes**



## Integrating 346 programs for the Soldier

# Managing Soldier System Transformation

## Requirements



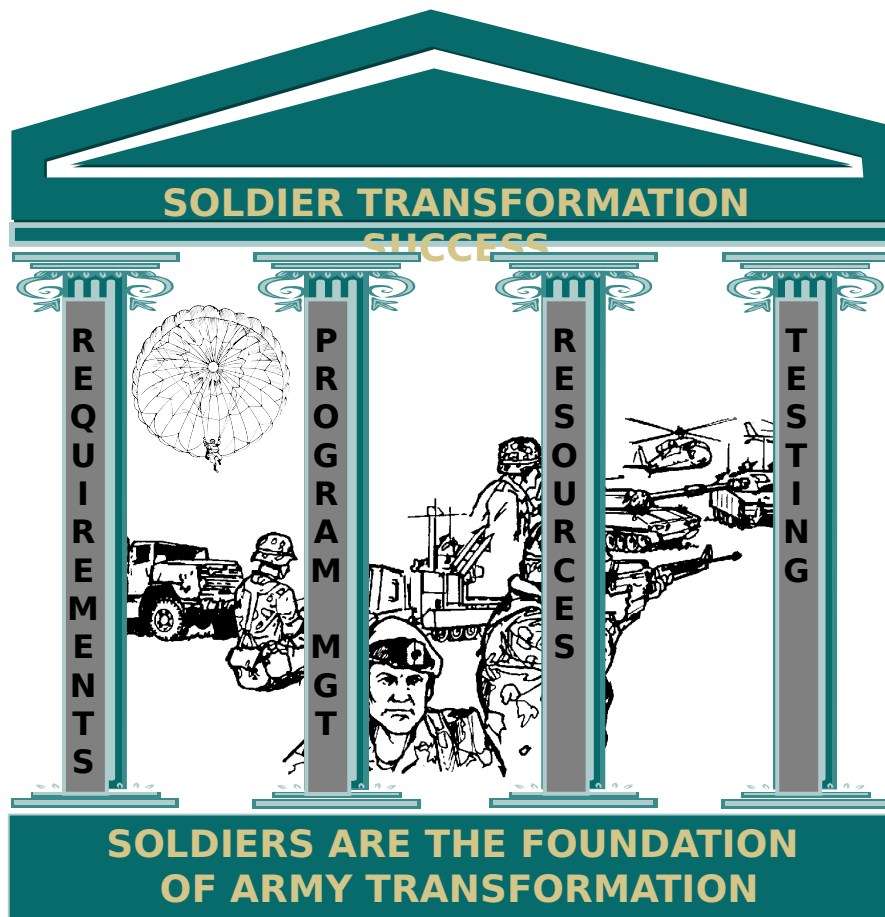
IS THE BALANCE RIGHT?

Soldier as a System

- Mission Need Statement
- Capstone Requirement Document
- AROC

## Program Management

- PEO Activated 7 Jun 02
- 346 Programs
- PEO/S&T OFW Team



## Resources

- S&T, SDD, & Procurement
- Future Soldier Programs
  - LW BLK III
  - XM-8
  - XM-29
  - XM-307
  - Air Warrior
- Establish Budget Operating System (BOS)
- Small Arms Industrial Base
- Centralized Funding and Fielding (CFF)
- Soldier Enhancement Program (SEP)

## Testing

- COTS Use
- Technology Insertion

*"Soldiers are the Centerpiece of our Formations"*

*GEN Shinseki*

# Objective Force Soldier



**Today**



**Ranger/  
Stryker**



**LW-Advanced  
Capability  
FCS Block I**

# Soldier Today

## Lethality



Modular Weapon System M4A1

## C2/SA



Paper Maps

## Mobility



ATPS

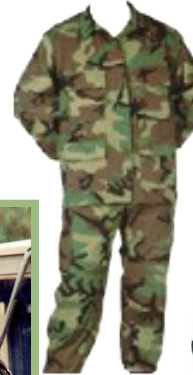


ALICE Pack



MOLLE

## Survivability



BDU



EOD Suit



Kevlar Helmet



Interceptor Body Armor



JSLIST

## Sustainability



Batteries



Water Hydration System

## Common Soldier Kit “+” Specialty Equipment



Night Vision

PLGR



PRC-126

# Objective Force Soldier



Today

MEDIC & OTHERS  
MOUNTED  
AIR  
LAND



Ranger/  
Stryker



LW-Advanced  
Capability  
FCS Block I

# Land Warrior Ranger/Stryker



✓ **Advanced Combat Helmet**

✓ **Kevlar Helmet**

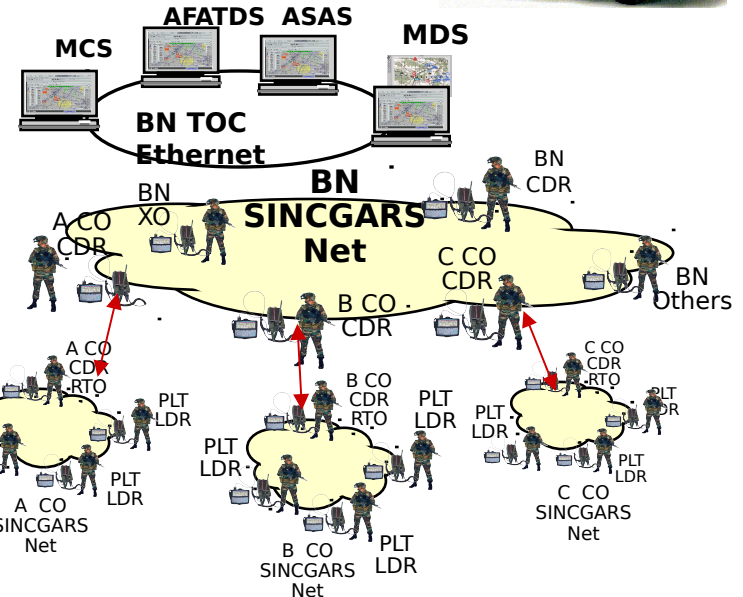
✓ **Laser Range Finder**

✓ **Helmet Mounted Display**

✓ **Link from Optics**

✓ **TWS**

✓ **Integrated Land Warrior GPS**



✓ **LW Communication System**

✓ **Commander's Digital Assistant**

✓ **Soldier Intercom**



**Army Could Accelerate  
Land Warrior Program**

# Objective Force Soldier



Today



Ranger/  
Stryker

MEDIC & OTHERS  
MOUNTED  
AIR  
LAND

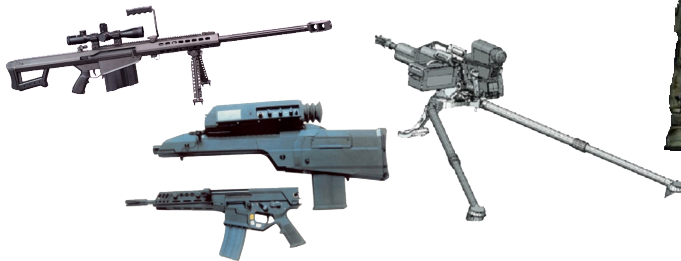
LW-Advanced  
Capability  
FCS Block I

# Land Warrior Advanced Capability

## FCS Block I Capabilities in FY08

### Lethality

- Linkage to netted fires
- XM8, XM29, XM307, XM107



### C2/SA

- ✓ FCS/Stryker network interface
- ✓ Compact, low power digital radio
- Mobile, ad hoc tactical network
- Organic RISTA at small team level
  - Micro Air Vehicle
- JTRS Cluster II Block II
- ✓ Fused I<sup>2</sup>/thermal
- Customized multi-modal Inputs (voice, tactile, visual)

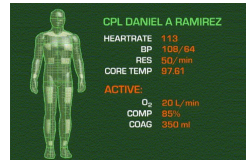


### Mobility

- ✓ Off-load body-borne weight to mule - 50 lbs on soldier
- ✓ 3D Navigation

### Survivability

- Integrated, full-spectrum protection
- Signature management
- ✓ Active thermal management
- ✓ Physiological status monitoring
- ✓ Remote Triage



### Sustainability

- ✓ 24 hr operations w/o re-supply
- Resupply from small team platform
- ✓ Hybrid power source
- ✓ Performance condition
- ✓ Training on-the-move; maintain proficiency (20% inc)
- ✓ Mission rehearsal (EMPRS)



### Weight

✓ Denotes New Capability

# The Soldier System

Infantry



centerpiece



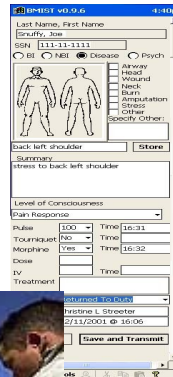
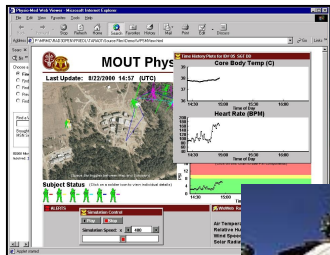
Aviator



ANGV



Medic



MP



# Key Points

- **Soldier as a System concept - Key to Success**
- **Army must balance between soldier centric and platform centric needs**
- **Establish common baseline for all Soldiers**
  - **Optimize the capability across all MOS**
  - **Focus as required for unique needs/missions**
- **All Soldier development and procurement activities must be centralized in a single Battlefield Operating System**
- **Organize Soldier PPBES For Soldier as a System**

**Common Issue with Mission Specific Kit**

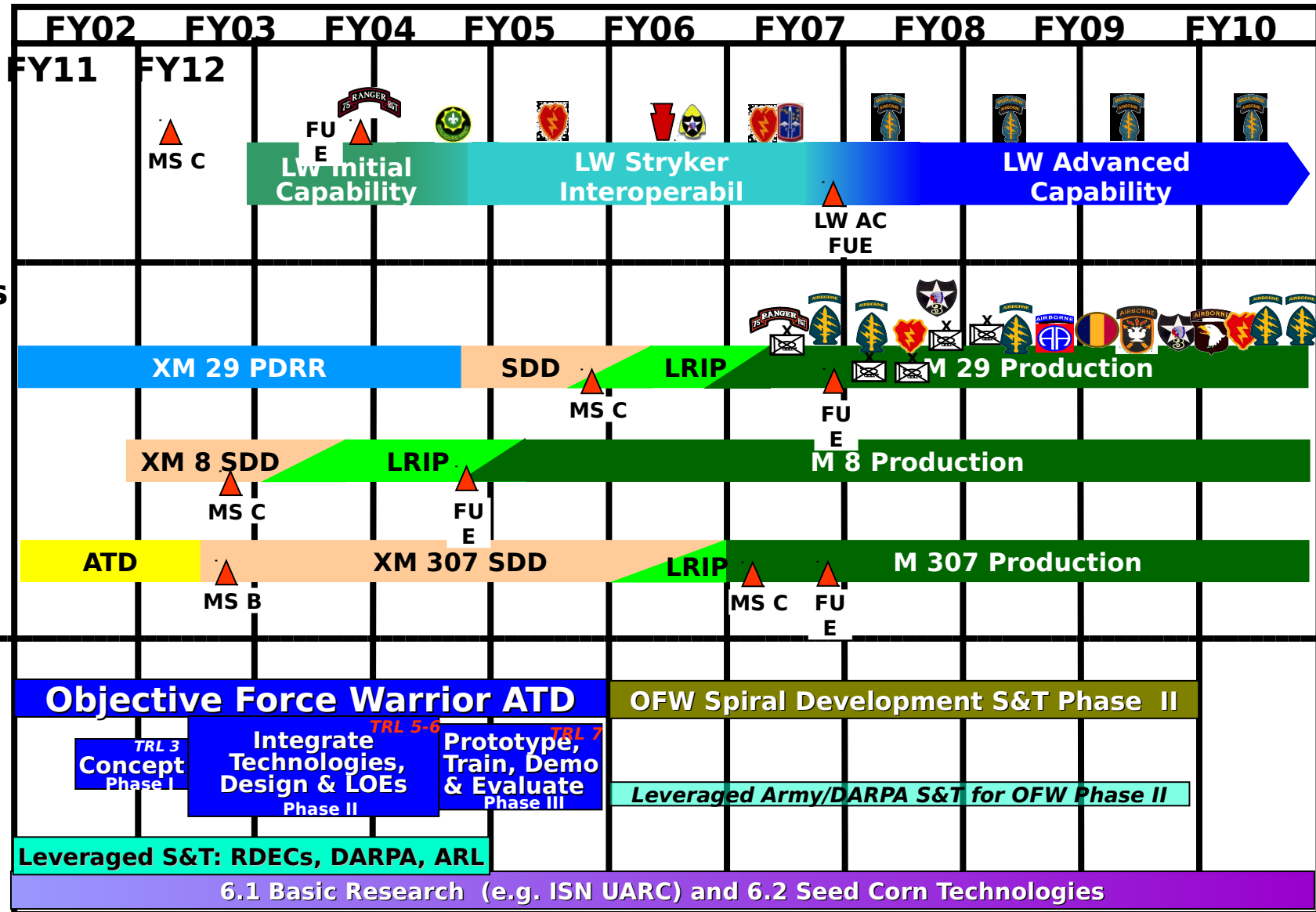
# Objective Force Soldier Fielding Integration



# Soldier Systems Acquisition Roadmap

DRAFT

DRAFT



**SOLDIER *WILL BE* CENTERPIECE  
OF THE OBJECTIVE FORCE  
FORMATION .....**

**Requirements +  
Resources = Capability**

**SOLDIER *WILL BE* CENTERPIECE  
OF THE OBJECTIVE FORCE  
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**Requirements +  
Resources = Capability**



# **Objective Force Soldier RRC Recommendations**

- **CSA approve concepts and way ahead to market, outreach, recruit, assess, precondition, train, and equip the Objective Force Soldier**
- **CSA approve concept to pursue a new management model for Soldier weapons and equipment acquisition**



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